

## DATA SHEET

# ARUBA CX 8325 SWITCH SERIES

High Performance Enterprise Campus and Data Center Switch

## PRODUCT OVERVIEW

The Aruba CX 8325 Switch Series offers a flexible and innovative approach to addressing the application, security, and scalability demands of the mobile, cloud and IoT era. These switches serve the needs of the next generation core and aggregation layer, as well as emerging data center requirements at the Top of Rack (ToR) and End of Row (EoR). They provide over 6.4Tbps of capacity, with line-rate Gigabit Ethernet interfaces including 1Gbps, 10Gbps, 25Gbps, 40Gbps, and 100Gbps.

The 8325 series includes industry-leading line rate ports 1/10/25GbE (SFP/SFP+/SFP28) and 40/100GbE (QSFP+/QSFP28) with connectivity in a compact 1U form factor. These switches offer a fantastic investment for customers wanting to migrate from older 1GbE/10GbE to faster 25GbE, or 10GbE/40GbE to 100GbE ports.

## PRODUCT DIFFERENTIATORS

### AOS-CX - a modern software system

The Aruba CX 8325 Switch Series is based on AOS-CX, a modern, database-driven operating system that automates and simplifies many critical and complex network tasks. A built-in time series database enables customers and developers to utilize software scripts for historical troubleshooting, as well as analysis of past trends. This helps predict and avoid future problems due to scale, security, and performance bottlenecks.

Our AOS-CX software also includes Aruba Network Analytics Engine (NAE) and support for Aruba NetEdit. Because AOS-CX is built on a modular Linux architecture with a stateful database, our operating system provides the following unique capabilities:

- Easy access to all network state information allows unique visibility and analytics
- REST APIs and Python scripting for fine-grained programmability of network tasks
- A micro-services architecture that enables full integration with other workflow systems and services
- Continual state synchronization that provides superior fault tolerance and high availability



## KEY FEATURES

- High performance 6.4Tbps with 2,000 Mpps
  - High availability with industry-leading VSX redundancy, and redundant power supplies and fans
  - Designed for core/aggregation in the campus or Top of Rack or End of Row in the data center
  - AOS-CX automation and programmability using built-in REST APIs and Python scripts
  - Advanced Layer 2/3 feature set includes BGP, OSPF, VRF-Lite, and IPv6
  - Dynamic VXLAN with BGP-EVPN for deep segmentation in data center and campus networks
  - Intelligent monitoring, visibility, and remediation with Aruba Network Analytics Engine
  - One touch deployment with the Aruba CX Mobile App
  - Aruba NetEdit support for automated configuration and verification
  - Compact 1U switch with 1/10/25GbE and 40/100GbE connectivity
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- Supports Aruba Fabric Composer - a software-defined orchestration solution that simplifies and accelerates leaf-spine network provisioning and day-to-day operations across rack-scale compute and storage infrastructure.
  - All software processes communicate with the database rather than each other, ensuring near real-time state and resiliency and allowing individual software modules to be independently upgraded for higher availability



### Aruba Central - unified single pane of glass management

Flexible cloud-based or on-premises management for unified network operations of wired, WLAN, SD-WAN, and public cloud infrastructure. Designed to simplify day zero through day two operations with streamlined workflows. Switch management capabilities include configuration, onboarding, monitoring, troubleshooting, and reporting.

DHCP on any single VLAN and connection to Central without any password enable smooth onboarding. Aruba Central provides Rest API patch support for incremental updates in configuration. Multiple switch softwares can also be updated in a site by a single download.

### Aruba Network Analytics Engine

For enhanced visibility and troubleshooting, Aruba's Network Analytics Engine (NAE) automatically interrogates and analyzes events that can impact a networks health. Advanced telemetry and automation provide the ability to easily identify and troubleshoot network, system, application and security related issues easily, through the use of python agents, CLI-based agents and REST APIs.

The Time Series Database (TSDB) stores configuration and operational state data, making it available to quickly resolve network issues. The data may also be used to analyze trends, identify anomalies and predict future capacity requirements.

### Aruba NetEdit – automated switch configuration and management

The entire Aruba CX portfolio empowers IT teams to orchestrate multiple switch configuration changes for smooth end-to-end service rollouts. Aruba NetEdit introduces automation that allows for rapid network-wide changes, and ensures policy conformance post network updates. Intelligent capabilities include search, edit, validation (including conformance checking), deployment and audit features. Capabilities include:

- Centralized configuration with validation for consistency and compliance
- Time savings via simultaneous viewing and editing of multiple configurations
- Customized validation tests for corporate compliance and network design
- Automated largescale configuration deployment without programming Network health and topology visibility via Aruba NAE integration

Note: A separate software license is required to use Aruba NetEdit.

### Aruba CX Mobile App – unparalleled deployment convenience

An easy to use mobile app simplifies connecting and managing Aruba CX switches for any size project. Switch information can also be imported into Aruba NetEdit for simplified configuration management and to continuously validate the conformance of configurations anywhere in the network. The Aruba CX Mobile App is available for download.

### Aruba Virtual Switching Extension

The ability of AOS-CX to maintain synchronous state across dual control planes allows a unique high availability solution called Aruba Virtual Switching Extension (VSX). VSX is delivered through redundancy gained by deploying two chassis with an inter-switch link, with each chassis maintaining its independent control.

Designed using the best features of existing HA technologies such as Multi-chassis Link Aggregation (MC-LAG) and Virtual Switching Framework (VSF), Aruba VSX enables a distributed architecture that is highly available during upgrades or control plane events. Features include:

- Continuous configuration synchronization via AOSCX
- Flexible activeactive network designs at Layers 2 and 3
- Operational simplicity and usability for easy configuration
- High availability by design during upgrades including support for VSX Live Upgrade with LACP traffic draining.

## PRODUCT CAPABILITIES

### Performance

#### High-speed fully distributed architecture

- Provides 6.4Tbps for bidirectional switching and 2,000 Mpps for forwarding. All switching and routing are wire-speed to meet the demands of bandwidth-intensive applications today and in the future

#### Scalable system design

- Provides investment protection to support future technologies and higher-speed connectivity



## Connectivity

### High density port options

Choice of compact high density port 1U switches with airflow direction flexibility include model with:

- 32 ports of 40GbE/100GbE (QSFP+/QSFP28) [optional 4x10 and 4x25 breakout]
- 48 ports of 1GbE/10GbE/25GbE (SFP/SFP+/SFP28) [1GBASE-T and 10GBASE-T transceiver support] + 8 ports of 40GbE/100GbE (QSFP+/QSFP28) [optional 4x10 and 4x25 breakout]

### Jumbo frames

- Allows high-performance backups and disaster-recovery systems; provides a maximum frame size of 9K bytes

### Unsupported Transceiver Mode (UTM)

- Allows to insert and enable all unsupported 1G and 10G transceiver and cable
- No warranty nor support for the transceiver/cable when used

### Loopback

- Supports internal loopback testing for maintenance purposes and increased availability; loopback detection protects against incorrect cabling or network configurations and can be enabled on a per-port or per-VLAN basis for added flexibility

### Packet storm protection

- Protects against unknown broadcast, multicast, or unicast storms with user-defined thresholds

### Quality of Service (QoS)

#### Strict priority (SP) queuing and Deficit Weighted Round Robin (DWRR)

- Enable congestion avoidance

### Storage Features

- PFC priority
- Enables 2 PFC priorities per port
- Flow-Control Guard
  - Prevents accumulation of excessive congestion with periodic flushing. Avoids packets buffering for an extended time period
  - Pre-standard LLDP DCBX
  - Enables pre-standard IEEE 1.01 version of DCBX
  - ECN with slope
  - Marks packets as ECN-CE (Congestion Experienced). Helps TCP to reduce receive window size during congestion

### Other Storage Features

- Advanced lossless pool configuration
- Global buffering statistics

### Data Center Bridging (DCB)

- Supports lossless Ethernet networking standard Priority Flow Control (PFC), Enhanced Transmission Service (ETS) and DCB Exchange Protocol (DCBX) to eliminate packet loss due to queue overflow

### Resiliency and high availability

#### Redundant and load-sharing fans and power supplies

- Increases total performance and power availability while providing hitless, stateful failover

#### Hot swappable power supply and fan modules

- Allows replacement of accessories modules without any operational impact on other modules nor the switch operations

#### Separate data and control paths

- Separates control from services and keeps service processing isolated; increases security and performance

#### Aruba Virtual Switching Extension (VSX)

- VSX enables a distributed and redundant architecture by deploying two switches with each switch maintaining independent control yet staying synchronized during upgrades or failover. Also supports upgrades during live operation

#### Virtual Router Redundancy Protocol (VRRP)

- VRRP allows a group of switches to dynamically back each other up to create highly available routed environments
- It also supports route-leaking to/from default VRF

#### Bidirectional Forward Detection (BFD)

- Enable sub-second failure detection for rapid routing protocol re-balancing

#### Ethernet Ring Protection Switching (ERPS)

- Supports rapid protection and recovery in a ring topology.

#### Unidirectional Link Detection (UDLD)

- Monitors link connectivity and shuts down ports at both ends if unidirectional traffic is detected, preventing loops in STP-based networks

#### IEEE 802.3ad LACP

- Supports up to 54 LAGs, with up to 16 members per LAG (32 for a VSX pair), with a user-selectable L1-4 hashing algorithm



## Management

In addition to the Aruba CX Mobile App, Aruba NetEdit and Aruba Network Analytics Engine, the 8325 series offers the following:

Built-in programmable and easy to use **REST API interface**

### Management interface control

- Enables or disables each of the following interfaces depending on security preferences: console port, or reset button

### Industry-standard CLI with a hierarchical structure

- Reduces training time and expenses, and increases productivity in multivendor installations

### Management security

- Restricts access to critical configuration commands; offers multiple privilege levels with password protection; ACLs provide SNMP access; local and remote Syslog capabilities allow logging of all access.
- Private VLAN (PVLAN) provides traffic isolation between users on the same VLAN. Typically a switch port can only communicate with other ports in the same community and/or an uplink port, regardless of VLAN ID or destination MAC address. This extends network security by restricting peer-peer communication to prevent variety of malicious attacks.

### IPSLA

- Monitors the network for degradation of various services, including voice.
- Monitoring is enabled via the NAE for history and for immediate automated gathering of additional information when anomalies are detected

### SNMP v2c/v3

- Provides SNMP read and trap support of industry standard Management Information Base (MIB), and private extensions
- It supports STP TCN Trap, STP New Root and SNMP-Write-Set-Description on Interface.

### sFlow® (RFC 3176)

- Provides scalable ASIC-based wire speed network monitoring and accounting with no impact on network performance; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes

## Remote monitoring (RMON)

- Uses standard SNMP to monitor essential network functions and supports events, alarms, history, and statistics groups as well as a private alarm extension group

## TFTP and SFTP support

- Offers different mechanisms for configuration updates; trivial FTP (TFTP) allows bidirectional transfers over a TCP/IP network
- Secure File Transfer Protocol (SFTP) runs over an SSH tunnel to provide additional security

## Debug and sampler utility

- Supports ping and traceroute for IPv4 and IPv6

## Network Time Protocol (NTP)

- Synchronizes timekeeping among distributed time servers and clients; keeps timekeeping consistent among all clock-dependent devices within the network
- Can serve as the NTP server in a customer network

## IEEE 802.1AB Link Layer Discovery Protocol (LLDP)

- Advertises and receives management information from adjacent devices on a network, facilitating easy mapping by network management applications

## Dual flash images

- Provides independent primary and secondary operating system files for backup while upgrading

## Multiple configuration files

- Stores files easily to the flash image

## Layer 2 Switching

### VLAN

- Supports up to 4,040 port-based or IEEE 802.1Q-based VLANs

### VLAN Translation

- Remaps VLANs during transit across a core network

### Bridge Protocol Data Unit (BPDU) tunneling

- Transmits STP BPDUs transparently, allowing correct tree calculations across service providers, WANs, or MANs

## Port mirroring

- Duplicates port traffic (ingress and egress) to a local or remote monitoring port; supports 4 mirroring groups, with an unlimited number of ports per group

## STP

- Supports standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)



### Rapid Per-VLAN spanning tree plus (RPVST+)

- Allows each VLAN to build a separate spanning tree to improve link bandwidth usage in network environments with multiple VLANs

### Internet Group Management Protocol (IGMP)

- Controls and manages the flooding of multicast packets in a Layer 2 network

### Static VXLAN

- Allows operators to manually connect two or more VXLAN tunnel endpoints (VTEP)

### Dynamic VXLAN with BGP-EVPN

- Deep segmentation for Spine/Leaf data center networks or Layer 3 campus designs with centralized gateway and symmetric Integrated Routing and Bridging (IRB) based distributed gateways VXLAN tunnels.
- EVPN and VXLAN features include inbound and outbound route map support, matching L3VNI matching, local-preference setting, ip next-hop, as-path prepend, ip/ipv6 address prefix-list matching.
- VXLAN DC multi-fabric DCI support.

### IPv4 Multicast in VXLAN/EVPN Overlay

- Enable PIM-SM/IGMP snooping in the VXLAN Overlay

### IPv6 VXLAN/EVPN Overlay Support

- Enables IPv6 traffic over the VXLAN overlay

### VXLAN distributed anycast gateway

- Addressing mechanism that enables the use of the same gateway IP addresses across all the leaf switches part of a VXLAN network.
- It supports VSX active forwarding for VXLAN underlay.

### VXLAN ARP/ND suppression

- Allows minimization of ARP and ND traffic flooding within individual VXLAN segments, thus optimizing the VXLAN network

### Layer 3 Services

#### Address Resolution Protocol (ARP)

- Determines the MAC address of another IP host in the same subnet; supports static ARPs
- Gratuitous ARP allows detection of duplicate IP addresses
- Proxy ARP allows normal ARP operation between subnets or when subnets are separated by a Layer 2 network

#### IP Directed Broadcast

- Supports directed broadcast on configured network subnets

### Dynamic Host Configuration Protocol (DHCP)

- DHCP services are offered within a client network to simplify network management
- DHCP Relay enables DHCP operation across subnets

### DHCP Server

- Supports DHCP services (for IPv4 and IPv6) in customer networks
- DHCP relay coexistence with server
- Allows DHCP relay coexistence with DHCP server for both IPv4 and IPv6

### Domain Name System (DNS)

- Provides a distributed database that translates domain names and IP addresses, which simplifies network design; supports client and server
- It also supports mDNS Gateway.

### Generic Routing Encapsulation (GRE)

- Enables tunneling traffic from site to site over a Layer 3 path

### Layer 3 Routing

#### Static IPv4 routing

- Provides simple manually configured IPv4 routing

#### Open shortest path first (OSPF)

- Delivers faster convergence; uses link-state routing Interior Gateway Protocol (IGP), which supports ECMP, NSSA, and MD5 authentication for increased security and graceful restart for faster failure recovery.
- Enhanced features include configurable OSPF distance for type-5 LSA and configurable default-metric for OSPF default-information guide.

#### Loopback IP redistribution in OSPF

- Allows redistribution of IPv4 and IPv6 addresses of loopback interface in OSPFv2/v3

#### Border Gateway Protocol 4 (BGP-4)

- Delivers an implementation of the Exterior Gateway Protocol (EGP) utilizing path vectors; uses TCP for enhanced reliability for the route discovery process; reduces bandwidth consumption by advertising only incremental updates; supports extensive policies for increased flexibility; scales to very large networks

#### Routing Information Protocol version 2 (RIPv2)

- Easy to configure routing protocol for small networks relying on User Datagram Protocol (UDP)

#### Routing Information Protocol Next Generation (RIPng)

- Extension of RIPv2 for support of IPv6 networking



### Multiprotocol BGP (MP-BGP) with IPv6 Address Family

- Enables sharing of IPv6 routes using BGP and connections to BGP peers using IPv6

### Policy Based Routing (PBR)

- Enables using a classifier to select traffic that can be forwarded based on policy set by the network administrator

### 6in4 tunnels

- Supports the tunneling of IPv6 traffic in an IPv4 network

### IP performance optimization

- Provides a set of tools to improve the performance of IPv4 networks; includes directed broadcasts, customization of TCP parameters, support of ICMP error packets, and extensive display capabilities

### Static IPv6 routing

- Provides simple manually configured IPv6 routing

### Dual IP stack

- Maintains separate stacks for IPv4 and IPv6 to ease the transition from an IPv4-only network to an IPv6-only network design

### OSPFv3

- Provides OSPF support for IPv6

### Equal-Cost Multipath (ECMP)

- Enables multiple equal-cost links in a routing environment to increase link redundancy and scale bandwidth

### Generic Routing Encapsulation (GRE)

- Enables tunneling traffic from site to site over a Layer 3 path

## Security

### TAA Compliance

- The Aruba CX 8325 with AOS-CX, a TAA compliant product, uses FIPS 140-2 validated cryptography for protection of sensitive information

### Access control list (ACL) Features

- Supports powerful ACLs for both IPv4 and IPv6. Supports creation of object groups representing sets of devices like IP addresses. For instance, IT management devices could be grouped in this way
- ACLs can also protect control plane services such as SSH, SNMP, NTP or web servers

### Enrollment over Secure Transport (EST)

- Enables secure certificate enrollment, allowing for easier enterprise management of PKI.

### Remote Authentication Dial-In User Service (RADIUS)

- Eases security access administration by using a password authentication server

### Terminal Access Controller Access-Control System (TACACS+)

- Delivers an authentication tool using TCP with encryption of the full authentication request, providing additional security

### RadSec

- Enable RADIUS authentication and accounting data to be passed safely and reliably across insecure networks such as the internet

### Management access security

- AOS-CX provides for both on-box as well as off-box authentication for administrative access. RADIUS or TACACS+ can be used to provide encrypted user authentication
- Additionally, TACACS+ can also provide user authorization services

### Secure shell (SSHv2)

- Uses external servers to securely log in to a remote device; with authentication and encryption, it protects against IP spoofing and plain-text password interception; increases the security of Secure FTP (SFTP) transfers

## Multicast

### Internet Group Management Protocol (IGMP)

- Enables establishing multicast group memberships in IPv4 networks; supports IGMPv1, v2, and v3

### Multicast Listener Discovery (MLD)

- Enable discovery of IPv6 multicast listeners; supports MLDv, v2.

### Multicast Service Delivery Protocol (MSDP) for Anycast RP

- MSDP used for Anycast RP is an intradomain feature that provides redundancy and load-sharing capabilities.

### MSDP Mesh Groups

- Allows to avoid SA messages flood to other mesh group peers.

### PIM-Dense Mode

- Floods multicast traffic to every corner of the network (push-model). Method is for delivering data to receivers without receivers requesting the data. Can be efficient in certain deployments in which there are active receivers on every subnet in the network. Branches without downstream receivers are pruned from the forwarding trees.



### FastLeave (FL) and Forced-FastLeave (FFL)

- FL and FFL for IGMP/MLD speed up the process of blocking unnecessary Multicast traffic to a switch port that is connected to end nodes for IGMP. They help to eliminate the CPU overhead of having to generate an IGMP/MLD Group- Specific Query message.

Support for Microsoft **Network Load Balancer** (NLB) for server applications

### Microsoft Network Load Balancer (NLB)

- Support for server applications

### Protocol Independent Multicast (PIM)

- Protocol Independent Multicast for IPv4 and IPv6 supports one-to-many and many-to-many media casting use cases such as IPTV over IPv4 and IPv6 networks. Support for PIM Sparse Mode (PIM-SM, IPv4, IPv6), Source-Specific Multicast (SSM), and Dense Mode (DM).

### Additional information

- Green initiative support
- Provides support for RoHS (EN 50581:2012) regulations

### Korea Government Security Features

- Ensure configuration integrity
- Limit concurrent users for web access
- Platforms: All CX platforms

### Analytics

- AIOPS - NAE Agent & Engine Improvements – Unicast Routing
- AIOPS - NAE Agent & Engine Improvements – Client Services

### Customer first, customer last support

When your network is important to your business, then your business needs the backing of Aruba Support Services. Partner with Aruba product experts to increase your team productivity, keep pace with technology advances, software releases, and obtain break-fix support.

Foundation Care for Aruba support services include priority access to Aruba Technical Assistance Center(TAC) engineers 24x7x365, flexible hardware and onsite support options, and total coverage for Aruba products. Aruba switches with assigned Aruba Central subscriptions benefit with option for additional hardware support only.

Aruba Pro Care adds fast access to senior Aruba TAC engineers, who are assigned as a single point of contact for case management, reducing the time spent addressing and resolving issues.

For complete details on Foundation Care and Aruba Pro Care, please visit: <https://www.arubanetworks.com/supportservices/>

### Warranty, services and support

#### Limited Lifetime Warranty

- See <https://www.arubanetworks.com/support-services/product-warranties/> for warranty and support information included with your product purchase.

For **Software Releases** and Documentation, refer to <https://asp.arubanetworks.com/downloads>

For **support and services** information, visit <https://www.arubanetworks.com/support-services/arubacare/>



SPECIFICATIONS				
	JL624A 8325-48Y8C Front-to-Back switch bundle	JL625A 8325-48Y8C Back-to-Front switch bundle	JL626A 8325-32C Front-to-Back switch bundle	JL627A 8325-32C Back-to-Front switch bundle
Description	1 x JL635A base 8325-48Y8C switch <ul style="list-style-type: none"> <li>6 x JL628A Front-to-Back Fan</li> <li>2 x JL632A Front-to-Back 650W 100-240VAC Power Supply</li> </ul>	1 x JL635A base 8325-48Y8C switch <ul style="list-style-type: none"> <li>6 x JL629A Back-to-Front Fan</li> <li>2 x JL633A Back-to-Front 650W 100-240VAC Power Supply</li> </ul>	1 x JL636A base 8325-32C switch <ul style="list-style-type: none"> <li>6 x JL630A Front-to-Back Fan</li> <li>2 x JL632A Front-to-Back 650W 100-240VAC Power Supply</li> </ul>	1 x JL636A base 8325-32C switch <ul style="list-style-type: none"> <li>6 x JL631A Back-to-Front Fan</li> <li>2 x JL633A Back-to-Front 650W 100-240VAC Power Supply</li> </ul>
	Supports 48 ports of 1G/10G/25GbE (SFP/SFP+/SFP28) and 8 ports of 40G/100GbE (QSFP+/QSFP28) [optional 1GBASE-T and 10GBASE-T transceivers, 4x10G and 4x25G breakout cables]	Supports 48 ports of 1G/10G/25GbE (SFP/SFP+/SFP28) and 8 ports of 40G/100GbE (QSFP+/QSFP28) [optional 1GBASE-T and 10GBASE-T transceivers, 4x10G and 4x25G breakout cables]	Supports 32 ports of 40G/100GbE (QSFP+/QSFP28) [optional 4x10G and 4x25G breakout cables]	Supports 32 ports of 40G/100GbE (QSFP+/QSFP28) [optional 4x10G and 4x25G breakout cables]
Power supplies	Field-replaceable, hot-swappable, and up to 2 power supplies.			
Fans	Field-replaceable, hot-swappable, and up to 6 fans.			
<b>Physical characteristics</b>				
Dimensions	(H) 4.35 cm x (W) 43.84 cm x (D) 53.6 cm (1.71" x 17.26" x 21.1")	(H) 4.35 cm x (W) 43.84 cm x (D) 53.6 cm (1.71" x 17.26" x 21.1")	(H) 4.395 cm x (W) 44.25 cm x (D) 47.3 cm (1.73" x 17.42" x 18.62")	(H) 4.395 cm x (W) 44.25 cm x (D) 47.3 cm (1.73" x 17.42" x 18.62")
Full configuration weight	10 kg (22.05 lb)	10 kg (22.05 lb)	10.87 kg (23.96 lb)	10.87 kg (23.96 lb)
<b>Additional specifications</b>				
CPU	2.2GHz			
Memory, Drive and Flash	16GB RAM, 64GB SSD, 8GB Flash			
Packet Buffer	32MB			
<b>Performance*</b>				
Switching Capacity	6.4Tbps			
IPv4 Host Table	120,000			
IPv6 Host Table	52,000			
IPv4 Unicast Routes	131,072			
IPv6 Unicast Routes	32,732			
MAC Table Size	98,304			
IGMP Groups	4,094			
MLD Groups	4,094			
IPv4 Multicast Routes	7,000			
IPv6 Multicast Routes	7,000			

\*Some of these scaling numbers assume shared tables.





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	JL624A 8325-48Y8C Front-to-Back switch bundle	JL625A 8325-48Y8C Back-to-Front switch bundle	JL626A 8325-32C Front-to-Back switch bundle	JL627A 8325-32C Back-to-Front switch bundle
<b>Environment</b>				
Operating temperature	0°C to 40°C (32°F to 104°F) up to 3.0 km (10,000 ft.)			
Operating relative humidity	5% to 95% at 40°C (104°F) non-condensing			
Non-Operating	-40°C to 70°C (-40°F to 158°F) up to 4.6 km (15,000 ft.)			
Non-Operating/Storage relative humidity	5% to 95% @ 65°C (149°F)			
Max operating altitude	Up to 10,000ft (3.048 km)			
Max non-operating	Up to 15,000ft (4.6km)			
Primary airflow	Front-to-Back or Back-to-Front			
<b>Electrical characteristics</b>				
Frequency	50-60Hz			
AC Voltage	100-240 volts			
Current	6A (low voltage) – 3A (high voltage)			
Power consumption	Max: 550W	Max: 550W	Max: 550W	Max: 550W
<b>Safety</b>				
	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013 IEC 60950-1:2005 Ed.2; Am 1:2009+A2:2013 UL 60950-1, CSA 22.2 No 60950-1 EN 60825-1:2007/IEC 60825-1:2007 Class 1			
<b>EMC</b>				
	EN 55032:2012, Class A EN 55024:2010 EN 61000-3-2:2014, Class A EN 61000-3-3:2013 FCC CFR 47 Part 15:2010, Class A VCCI Class A CNS 13438			
<b>Lasers</b>				
	EN60825-1:2014/IEC 60825-1: 2014 Class 1 Class 1 Laser Products/Laser Klasse 1			
<b>Management</b>				
	SNMP RJ-45 serial USB micro USB console RJ-45 Ethernet port			
<b>Mounting and enclosure</b>				
	Mounts in an EIA standard 19-inch rack or other equipment cabinet; horizontal surface mounting only; order 2-post or 4-post mounting kit separately			



## STANDARDS AND PROTOCOLS

The following standards and protocols are supported.

- IEEE 802.1AB-2009
- IEEE 802.1ak-2007
- IEEE 802.1t-2001
- IEEE 802.1AX-2008 Link Aggregation
- IEEE 802.1p Traffic Class Expediting and Dynamic Multicast Filtering
- IEEE 802.1Q VLANs
- IEEE 802.1s Multiple Spanning Trees
- IEEE 802.1w Rapid Reconfiguration of Spanning Tree
- IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- IEEE 802.3x Flow Control
- IEEE 802.3z Gigabit Ethernet
- IEEE 802.3ae 10 Gigabit Ethernet
- IEEE 802.3by 25 Gigabit Ethernet
- IEEE 802.3ba 40 and 100 Gigabit Ethernet Architecture
- RFC 768 UDP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 768 User Datagram Protocol
- RFC 813 Window and Acknowledgement Strategy in TCP
- RFC 815 IP datagram reassembly algorithms
- RFC 879 TCP maximum segment size and related topics
- RFC 896 Congestion control in IP/TCP internetworks
- RFC 917 Internet subnets
- RFC 919 Broadcasting Internet Datagrams
- RFC 922 Broadcasting Internet Datagrams in the Presence of Subnets (IP\_BROAD)
- RFC 925 Multi-LAN address resolution
- RFC 1215 Convention for defining traps for use with the SNMP
- RFC 1256 ICMP Router Discovery Messages
- RFC 1393 Traceroute Using an IP Option
- RFC 1591 Domain Name System Structure and Delegation
- RFC 1657 Definitions of Managed Objects for BGP-4 using SMIv2
- RFC 1772 Application of the Border Gateway Protocol in the Internet
- RFC 1981 Path MTU Discovery for IP version 6
- RFC 1997 BGP Communities Attribute
- RFC 1998 An Application of the BGP Community Attribute in Multi-home Routing
- RFC 2385 Protection of BGP Sessions via the TCP MD5 Signature Option
- RFC 2401 Security Architecture for the Internet Protocol
- RFC 2402 IP Authentication Header
- RFC 2406 IP Encapsulating Security Payload (ESP)
- RFC 2460 Internet Protocol, Version 6 (IPv6) Specification
- RFC 2545 Use of BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing
- RFC 2710 Multicast Listener Discovery (MLD) for IPv6
- RFC 2787 Definitions of Managed Objects for the Virtual Router Redundancy Protocol
- RFC 2918 Route Refresh Capability for BGP-4
- RFC 2934 Protocol Independent Multicast MIB for IPv4
- RFC 3137 OSPF Stub Router Advertisement
- RFC 3176 InMon Corporation's sFlow: A Method for Monitoring Traffic in Switched and Routed Networks
- RFC 3484: Default Address Selection for Internet Protocol version 6 (IPv6)
- RFC 3509 Alternative Implementations of OSPF Area Border Routers
- RFC 3623 Graceful OSPF Restart
- RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6
- RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers
- RFC 4251 The Secure Shell (SSH) Protocol
- RFC 4271 A Border Gateway Protocol 4 (BGP-4)
- RFC 4273 Definitions of Managed Objects for BGP-4
- RFC 4291 IP Version 6 Addressing Architecture
- RFC 4292 IP Forwarding Table MIB
- RFC 4293 Management Information Base for the Internet Protocol (IP)
- RFC 4360 BGP Extended Communities Attribute
- RFC 4486 Subcodes for BGP Cease Notification Message
- RFC 4552 Authentication/Confidentiality for OSPFv3
- RFC 4724 Graceful Restart Mechanism for BGP
- RFC 4760 Multiprotocol Extensions for BGP-4
- RFC 4940 IANA Considerations for OSPF
- RFC 5095: Deprecation of Type 0 Routing Headers in IPv6
- RFC 5187 OSPFv3 Graceful Restart
- RFC 5701 IPv6 Address Specific BGP Extended Community Attribute
- RFC 6987 OSPF Stub Router Advertisement
- RFC 7047 The Open vSwitch Database Management Protocol
- RFC 7059 A Comparison of IPv6-over-IPv4 Tunnel Mechanisms



- RFC 7313 Enhanced Route Refresh Capability for BGP-4
- RFC 8201 Path MTU Discovery for IP version 6

## BUNDLES AND ACCESSORIES

### Aruba CX 8325 Bundles

Note: Mounting kit and console cable are not included in bundles. Order separately. Mounting kit is required.

- R9F64A Aruba 8325-48Y8C Port to Power Airflow 6 Fans 2 Power Supply Units Bundle for HPE
- R9F65A Aruba 8325-48Y8C Port to Power Airflow 6 Fans 2 Power Supply Units Bundle for HPE
- R9F66A Aruba 8325-32C Port to Power Airflow 6 Fans 2 Power Supply Units Bundle for HPE
- R9F67A Aruba 8325-32C Power to Port Airflow 6 Fans 2 Power Supply Units Bundle for HPE

### Mounting kit (required when ordering a bundle)

- JL482B 2-post Rack Kit
- Aruba 4-post Rack Kit for HPE (R9F59A)

### Console Cable

- Aruba RJ45 to DB9 Console Cable for HPE (R9F58A)

### Accessories

- Aruba 8325-48Y8C Port to Power Airflow Fan for HPE (R9F68A)
- Aruba 8325-48Y8C Power to Port Airflow Fan for HPE (R9F69A)
- Aruba 8325-32C Port to Power Airflow Fan for HPE (R9F70A)
- Aruba 8325-32C Power to Port Airflow Fan for HPE (R9F71A)

### Power supply

- Aruba 8325 650W 100-240VAC Port to Power Airflow Power Supply Unit for HPE (R9F72A)
- Aruba 8325 650W 100-240VAC Power to Port Airflow Power Supply Unit for HPE (R9F73A)

### 1G Transceivers<sup>1</sup>

- Aruba 1G SFP LC SX 500m OM2 MMF Transceiver for HPE (R9F86A)
- Aruba 1G SFP LC LX 10km SMF Transceiver (J4859D)
- Aruba 1G SFP LC LH 70km SMF Transceiver (J4860D)
- Aruba 1G SFP RJ45 T 100m Cat5e Transceiver for HPE (R9F87A)
- Aruba 1G SFP LC SX 500m MMF TAA XCVR (JL745A)
- Aruba 1G SFP LC LX 10km SMF TAA XCVR (JL746A)
- Aruba 1G SFP RJ45 T 100m Cat5e TAA XCVR (JL747A)

### 10G Transceivers<sup>1</sup> and Cables

- Aruba 10G SFP+ LC SR 300m OM3 MMF Transceiver for HPE (R9F82A)
- Aruba 10G SFP+ LC SR 300m MMF TAA XCVR (JL748A)
- Aruba 10G SFP+ LC LR 10km SMF TAA XCVR (JL749A)
- Aruba 10G SFP+ LC LR 10km SMF Transceiver (J9151E)<sup>2</sup>
- Aruba 10G SFP+ LC ER 40km SMF Transceiver (J9153D)
- Aruba 10GBASE-T SFP+ RJ-45 30m Cat6A Transceiver (JL563A)<sup>3</sup>
- Aruba 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281D)
- Aruba 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283D)
- HPE (Compute) BLc 10G SFP+ SFP+ 3m DAC Cable (487655-B21)
- HPE (Compute) BLc 10G SFP+ SFP+ 5m DAC Cable (537963-B21)

### 25G Transceivers<sup>1</sup> and Cables

- Aruba 25G SFP28 LC SR 100m MMF Transceiver for HPE (R9F89A)
- Aruba 25G SFP28 LC eSR 400m MMF Transceiver for HPE (R9F90A)
- Aruba 25G SFP28 LC LR 10km SMF Transceiver (JL486A)
- Aruba 25G SFP28 to SFP28 0.65m Direct Attach Copper Cable for HPE (R9F91A)
- Aruba 25G SFP28 to SFP28 3m Direct Attach Copper Cable for HPE (R9F92A)
- Aruba 25G SFP28 to SFP28 5m Direct Attach Copper Cable for HPE (R9F93A)
- Aruba 25G SFP28 to SFP28 3m Active Optical Cable for HPE (R9F94A)
- Aruba 25G SFP28 to SFP28 7m Active Optical Cable for HPE (R9F95A)
- Aruba 25G SFP28 to SFP28 15m Active Optical Cable for HPE (R9F96A)
- HPE (Compute) 25Gb SFP28 to SFP28 3m DAC (844477-B21)
- HPE (Compute) 25Gb SFP28 to SFP28 5m DAC (844480-B21)

### 40G Transceivers<sup>1</sup> and Cables

- Aruba 40G QSFP+ LC Bidirectional 150m MMF 2-strand Transceiver for HPE (R9G02A)
- Aruba 40G QSFP+ MPO SR4 Transceiver for HPE (R9F97A)
- Aruba 40G QSFP+ MPO eSR4 300M Transceiver for HPE (R9F98A)
- HPE X142 40G QSFP+ LC LR4 SM Transceiver (JH232A)



- Aruba 40G QSFP+ LC ER4 40km SMF XCVR (Q9G82A)
- Aruba 40G QSFP+ to QSFP+ 1m Direct Attach Copper Cable for HPE (R9F99A)
- Aruba 40G QSFP+ to QSFP+ 3m Direct Attach Copper Cable for HPE (R9G00A)
- Aruba 40G QSFP+ to QSFP+ 5m Direct Attach Copper Cable for HPE (R9G01A)
- Aruba 40G QSFP+ to QSFP+ 7m Active Optical Cable for HPE (R9G03A)
- Aruba 40G QSFP+ to QSFP+ 15m Active Optical Cable for HPE (R9G04A)
- Aruba 40G QSFP+ to QSFP+ 30m Active Optical Cable for HPE (R9G05A)
- HPE HIT QSFP+ to 4xSFP+ 3m Breakout Direct Attach Cable (721064-B21)
- HPE (Compute) BLc QSFP+ to 4x10G SFP+ AOC 15m Opt (721076-B21)

#### 100G Transceivers<sup>1</sup> and Cables

- Aruba 100G QSFP28 MPO SR4 MMF Transceiver for HPE (R9F75A)
- Aruba 100G QSFP28 LC LR4 SMF Transceiver (JL310A)
- Aruba 100G QSFP28 LC CWDM4 2km SMF Transceiver (R0Z30A)
- Aruba 100G QSFP28 LC ER4L 40km SMF Transceiver (JL743A)
- Aruba 100G QSFP28 to QSFP28 1m Direct Attach Copper Cable for HPE (R9F77A)
- Aruba 100G QSFP28-QSFP28 3m Direct Attach Copper Cable for HPE (R9F74A)
- Aruba 100G QSFP28 to QSFP28 5m Direct Attach Copper Cable for HPE (R9F78A)
- Aruba 100G QSFP28 to QSFP28 2m Active Optical Cable for HPE (R9F76A)
- HPE Compute QSFP28 to 4xSFP28 3m Breakout Direct Attach Cable (845416-B21)
- Aruba 100G QSFP28 to QSFP28 7m Active Optical Cable for HPE (R9F79A)
- Aruba 100G QSFP28 to QSFP28 15m Active Optical Cable for HPE (R9F80A)

- Aruba 100G QSFP28 to QSFP28 30m Active Optical Cable for HPE (R9F81A)
- HPE (Compute) QSFP28 to 4x25G SFP28 7m Breakout Active Optical Cable (845420-B21)
- HPE (Compute) QSFP28 to 4x25G SFP28 15m Breakout Active Optical Cable (845424-B21)

Note: 8325 Series Switches do not support the use of 10G LRM transceivers (J9152D), nor 10G 7-meter Direct Attach Copper Cables (J9285D).

#### Aruba Central Foundation Licenses

- Aruba Central 8xxx Switch Foundation 1 year Subscription E-STU (R3K03AAE)
- Aruba Central 8xxx Switch Foundation 3 year Subscription E-STU (R3K04AAE)
- Aruba Central 8xxx Switch Foundation 5 year Subscription E-STU (R3K05AAE)
- Aruba Central 8xxx Switch Foundation 7 year Subscription E-STU (R3K06AAE)
- Aruba Central 8xxx Switch Foundation 10 year Subscription E-STU (R3K07AAE)
- Aruba Central On-Premises 8xxx Switch Foundation 1 year Subscription E-STU (R6U88AAE)
- Aruba Central On-Premises 8xxx Switch Foundation 3 year Subscription E-STU (R6U89AAE)
- Aruba Central On-Premises 8xxx Switch Foundation 5 year Subscription E-STU (R6U90AAE)
- Aruba Central On-Premises 8xxx Switch Foundation 7 year Subscription E-STU (R6U91AAE)
- Aruba Central On-Premises 8xxx Switch Foundation 10 year Subscription E-STU (R6U92AAE)

For details and complete listing of Aruba Central licensing options, please refer to the [Aruba Central Data Sheet](#).

<sup>1</sup> Consult the ArubaOS-Switch and AOS-CX Transceiver Guide in the Aruba Support Portal for the minimum required software releases to support these transceivers. Guide also provides certain limitations for specific transceivers for use on switch models.

<sup>2</sup> 10G LR support only for Revision E part, J9151E (Note: Do not use J9151D)

<sup>3</sup> Maximum of twelve (12) 10GBASE-T (JL563A) in 8325-48Y8C models only allowed in ports 1-2, 4-5, 7-8, 10-11, 13-14, 16-17 (Not applicable to 8325-32C models)

<sup>4</sup> Maximum of thirty-two (32) 1G RJ45 (J8177D) in 8325-48Y8C models only allowed in top two rows, not the third row (Not applicable to 8325-32C models)



### Aruba Fabric Composer

Aruba Fabric Composer Device Management Service Tier 4  
Switch 1 year Subscription E-STU (R7G99AAE)

Aruba Fabric Composer Device Management Service Tier 4  
Switch 3 year Subscription E-STU (R7H00AAE)

Aruba Fabric Composer Device Management Service Tier 4  
Switch 5 year Subscription E-STU (R7H01AAE)

Aruba Fabric Composer Device Management Service Tier 4  
Switch 7 year Subscription E-STU (R7H02AAE)

Aruba Fabric Composer Device Management Service Tier 4  
Switch 10 year Subscription E-STU (R7H03AAE)

### Support

- JL624A: 4 Hour Onsite 3 Year (HC7C2E)
- JL625A: 4 Hour Onsite 3 Year (HC7C2E)
- JL626A: 4 Hour Onsite 3 Year (HC7C1E)
- JL627A: 4 Hour Onsite 3 Year (HC7C1E)

For Aruba Central hardware only support, 24x7 TAC support, and many other support options, go to Support Services Central SKU lookup [tool](#).